

outside, about 7 inches; diameter of cavity about 3 inches, with a depth of 2 inches. When the young emerge from the shell, they have a covering of dark brown. We think the eye of the *Piopio* gleams with intelligence; perhaps this notion is conveyed by its narrow but light pale yellow iris; the tongue is pointed, furnished on the inferior side with a strong muscular process of almost horn-like consistence. Both skin and flesh are dark; but the flavour of the bird is not at all bad; it makes a savoury broil for those who bring the proper sauce; when not so provided, they do wanton mischief that kill a bird so harmless and interesting.

We noticed the Thrush flying from the top of a tree after insects, Flycatcher-fashion, in the glow of a hot afternoon.

Ohinatahi.

Descriptions of Buprestidæ collected in Japan by GEORGE LEWIS, Esq. By EDWARD SAUNDERS, F.L.S.

[Read February 20, 1873.]

THE following species of Buprestidæ form part of the large collection of insects made by Mr. George Lewis in Japan. The fauna of that island is so peculiar, that I thought a Table showing the distribution of its genera in other countries would be useful. Such a Table is almost necessarily drawn up from the described species only; but I think that, with the notes I have given, a fairly true idea may be obtained.

	Japan.	China.	Philip- pines.	India, Isles, and Aus- tralia.	Africa.	Europe, &c.	America.
<i>Chrysochroa</i>	1	<u>1</u>	2	30	1	.....	.....
<i>Chrysodema</i>	1	.....	5	24	.....	.....	.....
<i>Chaleophora</i>	2	.....	.....	1	.....	8	9
<i>Buprestis</i>	1	.....	.....	4??	1	19	25
<i>Anthaxia</i>	1	.....	.....	5	10	74	19
<i>Chrysobothris</i>	1	.....	.....	49	8	9	131
<i>Ptosima</i>	1	1	1	1	.....	2	2
<i>Coreëus</i>	2	.....	1	19	.....	5	.....
<i>Sambus</i>	1	.....	.....	12	1	.....	.....
<i>Cryptodactylus</i>	1	.....	.....	3	.....	.....	.....
<i>Agrilus</i>	11	1*	1	141 ₆	32	65 ₅	162†
<i>Cylindromorphus</i>	1	.....	.....	.....	.....	7	.....
<i>Trachys</i>	11	1	.....	45	13	13	.....
<i>Paratrachys</i>	1	.....	.....	*	.....	.....	.....

* An undescribed species.

† About as many again still undescribed.

The underlined figures indicate the country whose species the Japanese forms most closely resemble. Thus in *Chrysochroa* the species found in Japan is allied to the Indian and Chinese species. In *Agrilus* 5 species are of European facies and 6 of Indian.

It appears that 13 out of the 14 genera exist also in India, 7 in Africa, 9 in Europe, 6 in America, 5 in the Philippines, and 4 in China.

In all, I have described 34 new species, for one of which I have created a new genus, "*Paratrachys*." The species previously characterized are merely noted for the sake of making the list of the collection complete.

CHRYSOCHROA FULGIDISSIMA, *Schoen., Syn. Ins.* iii. p. 229.

Several specimens.

CHALCOPHORA QUERCETI, *E. S.* Capite cupreo, rugoso. Thorace rugoso-punctato, cupreo, tribus lineis lævibus olivaceis, quarum dorsali angustissima canaliculata. Elytris viridi-cupreis, utrinque quadricostatis, maculis plurimis parvis albo-tomentosis ornatis. Subtus viridicuprea, punctata.

Head coppery, rugose, excavated between the eyes. Thorax with its sides slightly rounded; base straight. Surface coppery and rugose, with three smooth rather wide longitudinal lines of an olive-green colour, the dorsal one of which is finely sulcate. Elytra coppery, with greenish reflections, each with four raised lines, and covered with numerous small punctured foveæ, many of which are filled with white pubescence; sides denticulate posteriorly. Beneath and legs coppery, covered with short white hairs.

Length 10 lines. Breadth $3\frac{1}{4}$ lines.

Hab. On the oak.

N.B. Should follow *amabilis*, Vollen.

CHALCOPHORA JAPONICA, *Gory, Mon. Suppl.* p. 81, pl. xiv. fig. 77.

Several specimens.

CHRYSODEMA LEWISII, *E. S.* Capite obscure viridi, excavato. Thorace cyaneo, aureo punctato, linea dorsali elevata lævi, lateribus inauratis, subrugosis, longitudinaliter impressis. Elytris cyaneis, aureo-punctatis et subrugosis, sutura viridi, lateribus utrinque linea impressa aurea ornatis, marginibus postice denticulatis. Subtus viridicyanea.

Head punctured, green on the vertex, cyaneous and excavated between the eyes. Antennæ cyaneous black, basal joint punctured with green. Thorax cyaneous, covered with golden green punctures on the disk; dorsal line raised and smooth; sides each with an impressed

longitudinal line, which is closely and rugosely punctured; the punctures golden; base and front margin straight; sides very slightly rounded. Elytra cyaneous on their raised parts, covered with lines of golden punctures (three or four punctures generally forming each depression); each elytron has two slightly raised cyaneous lines on its disk. Sides each with a golden fovea extending from the shoulder to the apex; between this and the margin is a well-marked cyaneous costa. Suture green. Posterior margins denticulate; apex pointed. Beneath and legs green-punctured.

The underside and marginal foveæ are covered with yellow powdery pubescence.

Length 10 lines. Breadth 3 lines.

Hab. On the oak.

One specimen.

BUPRESTIS JAPANENSIS, E. S. *Ænea*, capite plano, punctato. Thorace punctato, linea dorsali lævi. Elytris punctatis et leviter punctato-striatis, apicibus truncatis, bidentatis. Subtus ænea, apice rufo bimaçulato.

Entirely dull bronzy above. Head rugosely punctured (in some specimens red). Thorax punctured, especially at the sides; dorsal line and a small space on each side smooth; the former is met at the base by a triangular puncture; sides nearly straight. Elytra punctured, sparsely on the disk, closely on the sides, and punctate-striate; the interstices flat. There are two or three irregular depressions on the sides, as in *rustica*, L., *punctata*, &c. Apex of each elytron truncate and bidentate. Beneath bronzy, covered with a short greyish white pubescence, apical segment of abdomen with two red spots.

Length 9 lines. Breadth 3 lines.

Hab. On the fir.

Very near *punctata*, but larger, and with straighter sides to the thorax, and with flatter interstices to the elytra; it may probably prove to be only a variety.

ANTHAXIA PROTEUS, E. S. Læte viridis, capite plano. Thorace minutissime punctato, reticulato, lateribus rotundatis, basi recta. Elytris punctatis et minutissime rugulosis, lateribus inauratis, apicibus rotundatis; subtus viridis, albo pilosa.

Bright green. Head flat, finely reticulated. Thorax with the anterior margin very slightly produced, sides rounded, base straight, surface finely reticulated and extremely finely and rugosely punctured; in some lights the disk appears clouded, and the anterior margin and hind angles alone bright. Elytra punctured and very finely rugose; sides with a very slight golden-coppery tinge; apex rounded; suture raised posteriorly. Beneath and legs, which are very slender and long, green, white-pubescent.

Length 2 lines. Breadth $\frac{5}{8}$ line.

Hab. Japan.

Obs.—The entire insect has a silken sheeny appearance, the colour changing remarkably according to the light the insect is held in. There are some specimens before me in which the elytra are coppery-golden and the thorax slightly darker, its anterior margin and angles alone golden-green.

PTOSIMA CHINENSIS, *Mars., An. Soc. Ent. Franc.* vii. 1867, p. 54.

Several examples.

CHRYSOBOTHRIS SUCCEDANEA, *E. S.* Capite viridi-æneo, cupreo-micante, punctato, fronte transverse carinata. Thorace purpureo-fusco, transverse rugoso et punctato, lateribus cupreis. Elytris purpureo-fuscis creberrime punctatis, tribus foveis aureis utrinque notatis; sutura prope apicem viridi. Subtus aureo-viridis, lateribus tibiisque roseo-cupreis.

Head bronzy, with green and coppery reflections, transversely rugose, and with a strong transverse keel. Thorax purplish brown, with the sides coppery, slightly wider behind than in front; sides nearly straight; posterior angles largely rounded; base deeply bisinuate; surface deeply punctured and transversely rugose; on each side, parallel to and very near the margin, is a well-marked carina. Elytra brown, with a purplish tinge, deeply and very closely punctured, each with three golden foveæ—one at the base (a small one), one just above, and the other just below the middle. Besides these, there is a little green spot just behind each shoulder, and a streak of green on the suture just above the apex; sides denticulate posteriorly. From the apex a carina runs up parallel to the suture till it reaches the middle fovea; another runs parallel to the side as far as the shoulder. Beneath punctured, golden green, with the sides and tibiæ rosy copper-colour.

Length $4\frac{1}{2}$ lines. Breadth 2 lines.

Hab. Japan.

CORÆBUS IGNOTUS, *E. S.* Capite thoraceque aureo-cupreis, sparse flavo-pilosis. Elytris cupreo-fuscis, minutissime rugosis, utrinque tribus fasciis sinuatis maculaque apicali ornatis, fasciis duabus anticis interruptis, apicibus rotundatis. Subtus æneus, aureo-pubescent.

Head rugosely punctured, golden coppery, impressed between the eyes, and golden pubescent. Thorax golden coppery, clouded on the disk, rugosely punctured; sides covered with yellow hairs; posterior angles and base depressed, so as to give the disk a raised appearance; side margins finely crenulate; base bisinuate. Elytra finely rugose, coppery brown in front, purplish black posteriorly and along the suture; on each is a small round spot below the base, an irregular narrow

band just above the middle, a well-marked zigzag band just below it, and a short band close to the apex, which are golden pubescent; apex rounded; sides very finely denticulate posteriorly. Beneath bronzy, punctured, covered with golden hairs.

Length $4\frac{1}{2}$ lines. Breadth $1\frac{1}{2}$ line.

Hab. Japan.

SAMBUS QUADRICOLOR, *E. S.* Capite igneo-cupreo, tumido, vertice canaliculato. Thorace igneo cupreo punctato et striato, lateribus lineaque dorsali albo-pubescentibus. Elytris antice aureo-pilosis, postice nigris, fascia alba utrinque nigro bimaculata ornatis, apicibus rotundatis. Subtus nigro-æneus.

Head and thorax fiery copper-colour, the former much swollen on the vertex, with a few golden hairs above the mouth. Thorax with the sides rounded in front and slightly emarginate near the posterior angles; surface deeply punctate and concentrically striate; sides and base depressed; disk very convex; lateral carinæ very strongly marked; sides and dorsal line grey-pubescent. Elytra with the sides slightly sinuate above the middle; apex largely rounded; surface finely rugose; upper three fifths of elytra golden pubescent; rest black; in the middle of the black portion is a grey band, which has two small black spots in it on each elytron; suture, just above the black part, grey. Beneath and legs bronzy black, covered with depressed white hairs.

Length $2\frac{3}{4}$ lines. Breadth $1\frac{1}{6}$ line.

Hab. Japan.

CRYPTODACTYLUS AURICEPS, *E. S.* Caput aureum, inter oculos impressum, rugosum. Thorax niger, transverse rugosus, trifoveolatus, lateribus valde rotundatis. Basi lobata. Elytra nigra, utrinque macula circulari prope suturam, altera oblonga inter eam et marginem, duabusque fasciis valde sinuatis prope apicem, albo-pilosis ornata, apicibus rotundatis. Subtus punctatus.

Head golden, impressed between the eyes, and concentrically striate and punctured. Thorax black, with the anterior margin produced, the sides much rounded, and the base deeply bisinuate; surface concentrically striated, and with three large foveæ, a somewhat round one on the dorsal line near the anterior margin, and an ear-shaped one on each side extending from the base of the dorsal region to the posterior angle. Scutellum golden. Elytra black, with an irregular basal band, a circular spot on each side near the suture, an oval longitudinal spot placed slightly below it but nearer the margin, and two zigzag bands above the apex white-pubescent; surface finely rugose; apex rounded. Beneath black, punctured.

Length $3\frac{1}{2}$ lines. Breadth 1 line.

Hab. Japan.

AGRILUS TRINOTATUS. Æneus. Capite punctato. Thorace trans-

verso rugoso, linea dorsali lateribusque impressis. Elytris minute rugosis apicibus rotundatis, macula indistincta media duabusque maculis parvis inter illam et apicem albo-pilosis. Subtus æneus, punctatus, albo pubescens.

Bronzy. Head rather swollen, rugosely punctured. Thorax transversely rugose; sides nearly straight in the middle and converging to the angles; disk with two impressions on the dorsal line; sides also impressed; lateral carina extending about half the length of the side and curved. Elytra finely rugose; apex rounded, very finely denticulate; disk with a very obscure grey pubescent spot just below the middle; between this and the apex are two small triangular silvery spots set side by side on the edge of the suture. Beneath and legs bronzy, punctured.

Length 3 lines. Breadth 1 line.

Hab. Japan.

AGRILUS MACULIFER, E. S. Æneus. Capite viridi, albo-piloso.

Thorace dorso lateribusque impressis, albo-pubescentibus. Elytris albo-pilosis, fascia magna discali, macula parva apicali, maculaque parva rotundata inter basin fasciamque mediam æneis. Subtus æneus, albo-pubescentibus.

Bronzy. Head green, covered with white hairs. Thorax with the anterior margin nearly straight; sides converging from the anterior angles in almost straight lines to the base; base bisinuate; disk with the dorsal line impressed and filled with white hairs, and met at the base by a large oval transverse fovea; sides depressed; lateral carina short and nearly straight. Elytra bronzy brown, covered with white silvery hairs, with the exception of an irregular band at the middle, which is deeply cleft at the suture on its upper margin (in fact forming a very irregular zigzag), of a small spot between it and the apex, and of another between this and the base; sides sinuate below the shoulders; apex rounded. Beneath dull bronzy, covered with grey silky hairs.

Length $2\frac{1}{2}$ lines. Breadth $\frac{3}{4}$ line.

Hab. On a species of grass.

Somewhat like the following in style of markings, but quite different in shape and colour.

AGRILUS DISCALIS. Fusco-cupreus. Capite antice æneo, albo-pubescente. Thorace transverse rugoso, lateribus albo-pilosis. Elytris albo-pubescentibus, macula magna triangulari discali apicemque hætæ cupreis. Subtus aureo-pubescentibus.

Head coppery, bronzy in front, longitudinally rugose on the vertex, covered with very short white hairs between the eyes. Thorax coppery brown, transversely rugose; dorsal line and sides slightly impressed and covered with a silvery pubescence; sides rounded. Elytra finely

rugose, with a large triangular or somewhat diamond-shaped spot on the disk, and their apex brilliantly copper-coloured; the rest covered with silvery-grey hairs, although very sparsely near the shoulders; apex slightly produced and denticulated. Beneath bronzy, covered with golden hairs.

Length 3 lines. Breadth $\frac{2}{3}$ line.

Hab. On a species of grass.

AGRILUS CYANEONIGER, *E. S.* Capite vertice nigro, fronte aurea, excavato. Thorace nigro, lateribus cæruleis, disco longitudinaliter biimpresso transverse rugoso. Elytris minute rugosis, nigris, apicibus rotundatis, denticulatis. Subtus cyaneus.

Head black and longitudinally rugose on the vertex, golden above the mouth, having two impressions between the eyes, and deeply punctured. Thorax black, with the sides cyaneous; anterior margin slightly produced; sides nearly straight in the middle, and converging to the anterior and posterior margins; base deeply bisinuate; disk transversely rugose, with two wide impressions on the dorsal line; there is also a fovea above each lateral margin. Elytra covered with very short dark-grey pubescence, black, with a slight greenish tinge, very finely rugose; apex of each rounded and denticulate. Beneath cyaneous, punctured, grey-pubescent.

Length $5\frac{1}{2}$ lines. Breadth $1\frac{1}{2}$ line.

Hab. Japan.

AGRILUS PILOSOVITTATUS. *Æneus*. Capite inter oculos viridi, albo-piloso. Thorace transverse rugoso, lateribus foveaque basali impressis, carinis lateralibus arcuatis. Elytris breviter albo-pilosis, sutura ipsa nuda. Subtus æneus, albo-pilosus.

Bronzy. Head green, and covered with white hairs in front; bronzy and rugose on the vertex. Thorax dull æneous, transversely rugose; sides nearly straight and impressed above the lateral carinæ, which are almost semicircular; there is also an oval impression just above the scutellum; base bisinuate; median lobe slightly emarginate. Elytra covered with a short white sericeous pubescence invisible in certain lights. Looking straight down on the insect, it would appear to have its suture, margins, and apex destitute of hairs; but on closer examination, the suture only will be found naked; sides slightly swollen behind the middle; apex rounded. Beneath bronzy, covered with short white hairs.

Length 2 lines. Breadth $\frac{2}{3}$ line.

Hab. Japan.

AGRILUS VIRIDI-OBSCURUS, *E. S.* Capite thoraceque æneis. Thorace fortiter transverse rugoso, lateribus basique foveolatis, angulis posticis viridibus. Elytris rugosis, viridibus; sutura, præsertim postice, ænea. Subtus ænea.

Head and thorax æneous, the former very strongly punctured and narrowly channelled between the eyes; the latter with hind angles green; its sides rounded, slightly narrower behind than in front; surface very deeply punctured and transversely rugose; lateral carina on each side curved, and forming the margin to an elongate lateral fovea, which spreads out towards the base, but does not quite touch it; above the scutellum is an oval depression, and another very slight one near the front margin on the dorsal line. Elytra finely rugose, green; suture bronzy, the colour spreading out towards the apex, which is rounded; suture raised on its posterior third. Beneath and legs bronzy, punctured.

Length 2 lines. Breadth $\frac{2}{3}$ line.

Hab. Japan.

AGRILUS MARGINICOLLIS, *E. S.* *Æneus*. Capite inter oculos viridi. Thorace dorso bifoveato, transverse rugoso, lateribus foveatis, inauratis. Elytris rugosis; sutura albo-pilosa. Subtus æneus, albo-pubescentis.

Head golden green, punctured. Thorax bronzy, with the anterior margin produced and rounded; sides with their margins golden, slightly and regularly rounded; lateral carinæ curved; surface transversely rugose; dorsal line with an oval impression just above the scutellum, and another below the anterior margin, which are almost united in the middle; sides impressed in front above the lateral carinæ. Elytra bronzy, finely rugose, white-pubescent along the entire length of the suture, the pubescence spreading at the base so as to reach above the shoulders on either side, and interrupted about a third from the apex. I doubt whether the latter character will prove constant; but it occurs in the four examples I have before me; apex rounded, finely denticulate. Beneath and legs bronzy, covered with white hairs.

Length 2 lines. Breadth $\frac{3}{8}$ line.

Hab. Hiogo, April 1871.

AGRILUS SUBROBUSTUS. Robustus, aureo-æneus. Capite punctato, fronte plana, vertice canaliculato. Thorace punctato-ruguloso, prope scutellum depresso; lateribus rectis, carinis brevibus subrectis. Elytris minute rugulosis, sutura postice albo-pilosa, apicibus rotundatis. Subtus æneus.

Robust, golden bronzy. Head green in front and rugose, channelled on the vertex. Thorax with the anterior margin much produced; sides straight; base trisinate; surface deeply punctured and transversely rugose; just above the scutellum is a round impression; lateral carinæ very short and somewhat straight. Elytra finely rugose; apices rounded; posterior portion of the suture narrowly white pubescent; sides of the body protruding beyond the elytra and covered with a grey pubescence. Beneath bronzy, grey-pubescent.

Length $2\frac{3}{4}$ lines. Breadth $\frac{3}{4}$ line.

Hab. On oaks, Nagasaki.

AGRILUS AURIVENTRIS, *E. S.* *Æneus*. Capite inter oculos viridi, vertice canaliculato. Thorace transverse rugoso, foveis duabus dorsalibus, lateribus foveatis, inauratis. Elytris nigro-æneis, apicibus denticulatis, antice maculis irregularibus, postice fascia valde bisinuata, aureo-pilosis ornatis. Subtus aureus, pubescens.

Head flat in front, golden green, bronzy and slightly channelled on the vertex. Thorax widest in front, bronzy; sides golden; surface transversely rugose and punctured; dorsal line marked by an impression at the base and at the anterior margin; sides foveated in front; lateral carinæ short and curved. Elytra finely rugose, bronzy black apex of each sharply denticulate, in front marked with numerous gold pubescent spots; behind the middle is a zigzag band, and a spot near the apex, of the same colour. Sides of body projecting beyond the elytra, golden. Beneath golden, punctured, covered with short grey hairs.

Length 4 lines. Breadth 1 line.

Hab. Japan.

AGRILUS MÆRENS, *E. S.* *Æneus*. Capite inter oculos punctato, albo-piloso. Thorace transverse rugoso, fovea parva rotundata basali; lateribus foveatis, inauratis. Elytris minute rugosis, apicibus rotundatis, minutissime serratis. Subtus æneo-niger, albo-pubescens. Pedibus aureis.

Head bronzy, deeply punctured between the eyes, and covered with long white hairs. Thorax bronzy black, widest in front, punctured, and rugose in transverse wavy lines; dorsal line impressed widely at the base, so as to form a small fovea; sides foveated in the middle and golden; lateral carina very short and straight, in fact, hardly observable. Elytra bronzy black, finely rugose; apices very finely denticulate. Beneath punctured, white-pubescent. Legs golden.

Length 2 lines. Breadth $\frac{3}{4}$ line.

Hab. Japan.

AGRILUS ROTUNDICOLLIS, *E. S.* *Cyaneus*. Capite inter oculos punctato et albo-piloso. Thorace lateribus rotundatis, transverse rugoso, linea dorsali antice et supra scutellum impressa, lateribus foveatis. Elytris minute rugosis, apicibus rotundatis. Subtus punctatus.

Cyaneous blue. Head punctured and covered with white hairs above the mouth. Thorax with the sides rounded; surface transversely rugose and punctured; dorsal line met in front by a transverse impression, and at the base by an oval longitudinal fovea; sides also foveated about the middle; lateral carinæ well marked and but slightly curved. Elytra very finely rugose; extreme edges of the suture black; apex

of each rounded, very finely denticulate. Beneath punctured, covered with extremely short white hairs.

Length 2 lines. Breadth $\frac{3}{4}$ line.

Hab. Japan.

APHANISTICUS COLLARIS, *E. S.* Capite cupreo, valde excavato et punctato. Thorace æneo-cupreo, postice attenuato, lateribus rotundatis, disco transverse bicarinato, carinis cupreis. Elytris aureo-æneis, depressis, transverse rugosis, apicibus rotundatis. Subtus æneus.

Head coppery, very widely and deeply excavated between the eyes and punctured. Thorax widest in front; its anterior margin raised and very finely punctured; its sides rounded, and its base bisinuate; disk punctured, with two well-marked transverse coppery keels. Elytra golden bronzy, depressed, and transversely rugose; sides subparallel, apices rounded. Beneath bronzy, punctured. Antennæ with their basal two joints large and swollen; apical six flat and dilated.

Length $2\frac{1}{2}$ lines. Breadth $\frac{3}{4}$ line.

Hab. Nagasaki.

APHANISTICUS ANTENNATUS. Æneo-niger. Capite minuto, inter oculos excavato. Antennis clavatis. Thorace valde punctato, subquadrato, disco tumido; lateribus, præsertim ad angulos posticos, late depressis. Elytris valde et rugose punctato-striatis, apicibus rotundatis denticulatis. Subtus punctatus.

Bronzy, black. Head very largely punctured on the vertex, narrowly, but deeply, grooved between the eyes; the edges of the groove carinated. Antennæ with the second joint very large and round; the terminal four joints forming a decided club. Thorax very largely, but not deeply, punctured, somewhat quadrate; sides rounded, chiefly in front; disk very convex; sides widely, especially at the hind angles, and base narrowly, depressed. Elytra deeply and rugosely punctate-striate, deeply sinuate below the shoulders, then suddenly swelling out to just below the middle, whence they become narrower to the apex, which is rounded and finely denticulate; sides narrowly depressed. Beneath and legs punctured.

Length $1\frac{1}{2}$ line. Breadth $\frac{3}{8}$ line.

Hab. Japan.

APHANISTICUS CONGENER, *E. S.* Ater, capite minuto. Thorace punctato, postice valde latiore, marginibus, præsertim prope angulos posticos, depressis. Elytris transverse rugosis, et punctato-striatis, apice rotundato. Subtus pedibusque punctatus.

Black. Head very small, channelled between the eyes. Thorax largely and irregularly punctured; front margin scarcely more than half the length of the base; sides rounded, chiefly posteriorly, and depressed,

especially near the hind angles; the margin itself is slightly elevated; base straight. Elytra transversely rugose and largely punctate-striate sides sinuated above the middle; apex rounded. Beneath and legs punctured. Antennæ somewhat as in the last species.

Length $1\frac{1}{4}$ line. Breadth $\frac{1}{2}$ line.

Resembles the preceding, but smaller, and may be at once separated from it by the shape of the thorax, which in this species is contracted in front.

CYLINDROMORPHUS JAPANENSIS, E. S. *Elongatus, cylindricus.* Capite æneo, magno, tumido, punctato. Thorace æneo, rugose punctato, lateribus valde carinatis, disco transversaliter elevato, basi valde depressa. Elytris rugosis, nigro-æneis, apicibus rotundatis. Subtus nigro-æneus, punctatus.

Elongate, cylindrical. Head and thorax bronzy, the former very large and swollen, channelled in front and deeply punctured. Thorax widest in front; anterior margin produced; sides almost straight; surface punctured in a variolose manner; disk with a smooth raised transverse line, between which and the base is a large depression bordered by the lateral carinæ, which are very strongly marked and nearly straight. Elytra bronzy black, transversely rugose, and punctured; apices rounded. Beneath and legs bronzy.

Length 2 lines. Breadth $\frac{1}{2}$ line.

Hab. Japan.

TRACHYS.

Species depressed. Thorax flattened at the sides. Elytra with a lateral carina above the margin.

TRACHYS LEWISII, E. S. Thorax aurco-æneus. Elytra cyanea, sutura antice fasciisque duabus aureis albo-pubescentibus. Subtus ænea.

Head and thorax golden bronzy, covered with golden hairs; sides of the latter much depressed and flattened; anterior margin very much excavated, so as to receive the head, which is excavated between the eyes; sides rounded; base trisinate, middle lobe the largest; disk somewhat irregularly raised. Elytra cyaneous, with the apex, suture, and two transverse bands springing from it above the apex golden and covered with grey and golden pubescence, the golden pubescence predominating, especially on the suture and apex; surface irregularly punctured; sides gradually converging to the apex, which is widely rounded. Beneath dull bronzy black.

Length $1\frac{1}{3}$ line. Breadth $\frac{5}{6}$ line.

Hab. Japan.

TRACHYS GRISEO-NIGRA, *E. S.* Nigra. Capite thoraceque griseo-pubescentibus. Elytris griseis, macula oblonga utrinque ante medium, ad suturam conjunctis, alteraque rotundata prope apicem nigris. Subtus nigra.

Grey-pubescent. Elytra with an elongate spot on each, starting from the base and uniting at the suture about the middle, and a small round one between each and the apex, black. Beneath black.

Head deeply and semicircularly excavated between the eyes. Thorax with the anterior margin deeply and roundly emarginate, its angles enclosing the head, up to the backs of the eyes; sides rounded, depressed; base trisinate. Elytra with its sides straight, and gradually converging to the apex, which is very widely rounded; surface punctured. Beneath punctured.

Length $1\frac{1}{3}$ line. Breadth $\frac{5}{8}$ line.

Hab. Nagasaki.

TRACHYS ELEGANTULA, *E. S.* Aenea. Capite valde excavato, aureo-piloso. Thorace lateribus rotundatis, depressis, postice trisinuato, capillis aureis obsito. Elytris punctatis, capillis aureis variegatis. Subtus punctata.

Bronzy. Head golden-pubescent, deeply excavated between the eyes. Thorax with the anterior margin largely emarginate, its angles produced to the back of the eyes. Sides rounded, depressed; base trisinate; surface covered with greyish and golden hairs, with a deep fovea near each anterior angle. Elytra, sides converging in nearly straight lines two thirds of their length, then rounded to the apex; shoulders raised, lateral carina extending almost to the apex; surface punctured, with four irregular greyish pubescent bands, the two upper ones sinuate at the suture, the apical one nearly straight; there is also a very narrow basal band. In rubbed specimens the centres of the two middle bands are generally marked strongest. Beneath punctured.

Length $1\frac{1}{4}$ line. Breadth $\frac{3}{4}$ line.

Hab. Japan.

Species without flattened sides to the thorax, and without lateral carinae to the elytra.

TRACHYS AURICOLLIS, *E. S.* Capite thoraceque aureo-pilosis. Elytris nigris, antice griseo-variegatis, postice fasciis duabus valde sinuatis griseis ornatis, humeris prominentibus. Subtus nigra.

Head deeply excavated between the eyes, covered with long scricaceous golden pubescence. Thorax with the base bisinuate; surface punctured in a scale-like manner, covered with golden pubescence with the exception of the base. Elytra rugosely punctured. Shoulders very prominent; sides slightly sinuate below them, rounded about the middle, and then somewhat straight to the apex, which is widely rounded. Above the middle of the elytra are several irregular grey

lines, and above the apex two well-marked grey zigzag bands.
Beneath black, punctured.

Length 2 lines. Breadth $1\frac{1}{6}$ line.

Hab. Japan.

TRACHYS GRISEOFASCIATA, E. S. Suboblonga, ænea, micans, fusco pubescens. Elytris antice irregulariter griseo-maculatis, postice fuscis duabus griseo-pilosis ornatis.

Elongate, golden. Head bronzy, shining, deeply excavated between the eyes, and covered with golden-brown hairs. Thorax bronzy; sides slightly rounded; base with a deep median lobe; surface covered with brown hairs. Elytra covered with chocolate-brown hairs; the shoulders rather prominent; sides rounded; posterior margin denticulate; apex rounded. Above the middle of the elytra are several irregular grey-pubescent lines; below the middle two well-marked wavy bands of the same colour. Beneath dull bronzy, slightly pubescent.

Length $1\frac{3}{4}$ line. Breadth 1 line.

Hab. Japan.

TRACHYS ROBUSTA, E. S. Brevis, capite thoraceque fusco-pubescentibus. Elytris fusco-pilosis fasciis rufo-fuscis et griseis ornatis.

Very like the preceding, but shorter and wider, and altogether a stouter insect. The bands are arranged much in the same manner; but the chocolate-brown pubescence, instead of being evenly distributed all over the elytra, seems to be collected round the edge of the grey bands, the remaining surface being more sparsely covered.

Length 2 lines. Breadth $1\frac{1}{3}$ line.

Hab. Japan.

Obs.—In one specimen the brown pubescence almost covers the grey, but its uneven disposition is still characteristic.

TRACHYS CUPRICOLOR, E. S. Capite thoraceque cupreis, nitentibus, aureo-pubescentibus. Elytris cupreo-fuscis, rugosis, fasciis irregularibus griseo-sericeis ornatis, apice cuprea. Subtus cupreo-fusca.

Head and thorax coppery golden, covered with golden hairs; the former excavated between the eyes, the upper margin of the excavation devoid of hairs. Thorax covered with golden hairs except just about the dorsal line, which is shining; base with a deep median lobe; near and above each posterior angle is a slight transverse impression; surface punctured. Elytra dark coppery brown, finely rugose; their front half variegated with grey lines of pubescence, the posterior with two narrow grey wavy bands; apex coppery. Shoulders somewhat prominent. Beneath coppery brown.

Length 2 lines. Breadth $1\frac{1}{3}$ line.

TRACHYS VARIOLARIS, E. S. Æneo-nigra. Capite thoraceque aureo-pilosis. Thorace ad basin crinibus fuscis ornato. Elytris antice, capillis

albis atque fuscis, postice fasciis duabus albo-griseis ornatis. Subtus ænea, punctata.

Bronzy black. Head and thorax covered with golden hairs, the latter with a small tuft of brown hairs near the base on each side of the dorsal line and another between it and the margin; anterior margin emarginate; base with a depression above each of its sinuations. Elytra ornamented with irregular flexuous bands of brown and white hairs on their upper half; below the middle are two greyish white transverse bands, the middle of each brown; these lower bands are very strongly marked, and give a remarkable character to the species: in some specimens the brown is greatly predominant. Shoulders, which are decidedly prominent, and a tubercle above the apex, smooth; apex very largely rounded. Beneath bronzy, punctured.

Length 2 lines. Breadth $1\frac{1}{8}$ line.

Hab. Japan.

TRACHYS INEDITA, *E. S.* Capite thoraceque æneis, sparse pubescentibus. Elytris æneis, rugose punctatis, tribus fasciis griseis irregularibus aureo-marginatis et valde sinuatis ornatis. Subtus æneo-nigra.

Head golden-yellow, pubescent, depressed on the vertex between the eyes, foveolated above the mouth. Thorax, sides nearly straight, base with a deep median lobe, somewhat sparsely covered with dark golden-yellow hairs. Elytra with the shoulders rather prominent; sides sinuate below them, then rounded below the middle, and converging to the apex; surface sparsely covered with short golden hairs, as the thorax, with three irregular zigzag grey bands, the two nearer the apex well marked, the upper one rather obscure; the grey of the bands is margined on the lower side with golden pubescence. Beneath black-punctured.

Length $1\frac{1}{2}$ line. Breadth 1 line.

Hab. Japan.

TRACHYS INCONSPICUA, *E. S.* Ænea, punctata, capillis griseis obsita. Thorace postice impresso. Elytris tribus fasciis griseis ornatis, quarum media valde sinuata.

Short, bronzy, shining, sparsely covered with short grey silvery hairs. Head foveolated between the eyes. Thorax with the base slightly depressed and deeply lobed in the centre. Elytra with the shoulders rather prominent, each with a depression at the base above the shoulder; surface finely punctured, and covered with fine short hairs arranged in lines; near the middle is an interrupted band of grey silvery hairs consisting generally merely of two spots; below this is a well-marked zigzag band; and between it and the apex, and quite close to the latter, another very narrow one; apex rounded.

Length $1\frac{1}{4}$ line. Breadth $\frac{3}{4}$ line.

Hab. Japan.

PARATRACHYS, E. S.

A genere præcedente differt *forma* ovali, *humericis* haud elevatis, *thoracis* basi recta, *capite* plano haud excavato, *antennis* brevioribus, articulis sex apicalibus dentatis atque etiam forma positæque antennarum cavorum.

This little genus may be distinguished from *Trachys*, its ally, by the following characters:—Shoulders not raised and prominent. Thorax with its base straight. Antennæ short and hairy, with their apical six joints dentate instead of five. Head flat, not excavated. Antennary cavities placed lower down and small. Tarsi with rather longer lamellæ.

N.B. I know of another species of this genus from India.

PARATRACHYS HEDERÆ, E. S. *Æneo-nigra*. Capite thoraceque punctatis, griseo nigroque pilosis. Elytris punctatis, nigro-pilosis, fasciis duabus post medium griseis ornatis. Subtus ænea, griseo, pubescens.

Bronzy black. Head punctured, covered with greyish hairs. Thorax with the anterior margin slightly produced; sides rounded; base straight; surface coarsely punctured and covered with black hairs, and with a fringe of grey hairs at the base. Elytra punctured, covered with black hairs, and with three grey bands, the first along the base, the second placed near the middle, and zigzag in its form, the third nearly straight and situated midway between it and the apex; the two lower bands are connected in the middle of each elytron; apex widely rounded. Beneath bronzy, punctured, grey-pubescent.

Length $1\frac{1}{2}$ line. Breadth 1 line.

Hab. On ivy stems.

On the Skeleton of the Apteryx.

By THOMAS ALLIS, F.L.S.

[Read December 3, 1872.]

THERE were exhibited two photographs of the skeleton of an Apteryx, which he had prepared and mounted himself; and Mr. Allis pointed out that it differed from the one figured by Professor Owen (in the second volume of the 'Transactions of the Zoological Society') in the absence of a nail at the end of the wing, in the greater breadth of the ribs, in the absence of foramina in the sternum and scapulo-coracoid, and in the more complete ankylosis of the sacro-caudal vertebræ—differences most of which might be attributed to the more mature condition of the specimen.
